

Energy and Environmental Impact Comparison of the Pig® Grippy® Floor Mat and Rental Floor Mat

New Pig, located in Tipton, Pennsylvania, is a manufacturer and distributor of industrial products to absorb, contain, and clean up leaks, drips, splatters and spills. New Pig has a long history of environmental stewardship.

To continue to improve and broaden its product offering, New Pig has developed the Pig® Grippy® Floor Mat, believed to be a more environmentally friendly product compared to a rental mat, commonly used at public building entrances to absorb water and remove dirt and debris from shoes when entering the building. The Pig® Grippy® Floor Mat is designed to be used in place for three months, eliminating laundering seen with rental mats.

Challenge

New Pig requested that the Golisano Institute for Sustainability (GIS) at Rochester Institute of Technology (RIT) scientifically study the life cycle environmental impacts of the Pig® Grippy® Floor Mat and quantify its environmental footprint via Life Cycle Assessment (LCA) as compared to a conventional rental mat. New Pig was particularly interested in the impacts due to laundering the rental mat and disposing of the Pig® Grippy® Floor Mat at the end of its use.



Solution

New York State Pollution Prevention Institute (NYSP2I) performed an ISO 14040/44 compliant comparative assertion LCA of the Pig® Grippy® Floor Mat and a comparable rental mat. The LCA was peer reviewed by a panel of three LCA experts led by Four Elements Consulting, LLC.

The goal was to quantify and compare the environmental and energy impacts of the mats. Data represents mats used to cover a three feet by ten feet (3'x10') section of floor in a retail environment for one year. Rental mats are made from carpet fused to rubber backing. New Pig's Pig® Grippy® Floor Mat has less material than rental mats and an adhesive backing so the mat remains in place once installed. Pig® Grippy® Floor Mats are replaced every three months and rental mats are laundered weekly for four months (to account for wet fall/winter/spring weather) and every other week for eight months. Rental mats are replaced every three years and both mats are landfilled at end of life.

CHALLENGE

- New Pig requested that Golisano Institute for Sustainability (GIS) at Rochester Institute of Technology (RIT) scientifically study the life cycle environmental impacts of the Pig® Grippy® Floor Mat and quantify its environmental footprint via Life Cycle Assessment (LCA) as compared to a conventional rental mat.

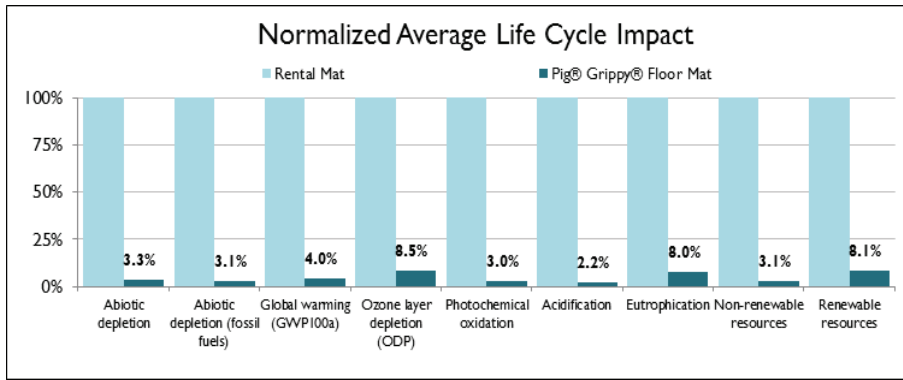
SOLUTION

- NYSP2I performed an ISO 14040/44 complaint comparative assertion LCA of the Pig® Grippy® Floor Mat and a comparable rental mat.

RESULTS

- LCA results show that the Pig® Grippy® Floor Mat has about 92% to 98% less life cycle impact than that of the rental mat.
- Results were used internally to understand the influence of supplier and New Pig operations on impacts.
- Results were used externally to communicate environmental impact of the Pig® Grippy® Floor Mat as an environmentally preferable alternative to traditional rental mats.

Results



LCA results show that the Pig® Grippy® Floor Mat has about 92% to 98% less life cycle impact than that of the rental mat. The majority of the reduced impact is attributed to the elimination of laundering when using the Pig® Grippy® Floor Mat.

Results were used internally to understand the influence of supplier and New Pig operations on impacts.

Results were used externally to communicate environmental impact of the Pig® Grippy® Floor mat as an environmentally preferable alternative to traditional rental mats.

- Validate and support Pig® Grippy® Floor Mat environmental claims made by New Pig
- Educate and assist customers in making more informed purchasing decisions

TESTIMONIAL

“To understand the environmental impact of our Grippy Floor Mat, New Pig partnered with NYSP2I to perform a life cycle assessment of our mat and traditional, laundered floor mats. NYSP2I’s LCA experts analyzed both mat systems and quantified the environmental impacts of each. The analysis results show a significant environmental benefit in using our Grippy Floor Mat over laundered mats in a retail setting. LCA provides a framework to provide the science behind environmental claims, ensuring their validity and applicability. The LCA results allow us to quantify and articulate the benefit to potential customers and make accurate environmental claims, and we expect business to significantly expand as a result. We appreciate the thoroughness and professionalism of NYSP2I’s LCA team throughout the project.”

– Daniel Silver, VP of Product Development
New Pig

NYSP2I PARTNERS



New York Manufacturing Extension Partnership

Funding provided by the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation. © 2017 Rochester Institute of Technology. Any opinions, results, findings, and/or interpretations of data contained herein are the responsibility of Rochester Institute of Technology and its NYS Pollution Prevention Institute and do not represent the opinions, interpretation or policy of the State.

For more information please contact us:

111 Lomb Memorial Drive, Bldg. 78
Rochester, NY 14623

Tel: 585-475-2512
Web: nysp2i.rit.edu
E-mail: nysp2i@rit.edu

